PRESENT WALL OF STEEL TO ENEMY

American Soldiers Will Be Armed to Teeth When They Go Into Trenches.

BAKER GIVES OUT DETAILS

One Hundred and Ninety-Two Guns and 480 Trench Knives Added to Equipment of Each Regiment in Reorganization.

Washington.—American soldiers will be literally armed to the teeth when they go into the trenches.

In addition to the usual rifles, bayonets and pistols with which the men are now armed, there will be added to the fighting equipment of each regiment 480 trench knives, 40 to each company; 192 machine guns, 16 to each company, and three one-pound cannon.

Details of the men's fighting equipment were given in a statement by Secretary of War Baker, outlining the new army organization for overseas service.

27,152 Men in Division.

The new organization increased the ratio of artillery to infantry from three to nine, as at present, to three to four. A corresponding increase is made in machine gun strength. In addition, there are sections of sappers and bombers which have important parts to play in the new warfare.

The strength of the new organizations will be: Divisions, 27,152; infantry brigade, 8,210; artillery brigade, 5,068; infantry company, 256, and machine gun company, 178.

Each infantry regiment will have a strength of 103 officers and 3,652 men. There will be one headquarters, and a headquarters company of 313; three battalions of four rifle companies, each totalling 3,078; one supply company of 140, one machine gun company and one medical detachment of 56.

The rifle company has 250 men and six officers. It is composed of a company headquarters and two officers and 18 men, and four platoons. Each platoon has two sections of riflemen of 12 each, or 24 men; one section of bombers and rifle grenadiers of 22 men, and one section of auto rifle of 11 men and four guns.

The 178 men of the machine gun company will be armed with 12 heavy machine guns and four spare guns.

Details of Organization.

The organization of the infantry division in detail follows:

One division headquarters..............	164
One machine gun battalion of four companies	758
Two infantry brigades, each composed of two infantry regiments, and one machine gun battalion of three companies........................	16,430
One field artillery brigade, composed of three field artillery regiments and one trench mortar battery.....	5,068
One field signal battalion............	262
One regiment of engineers..........	1,666
One train headquarters and military police	337
One ammunition train..................	962
One supply train........................	472
One engineer train......................	84
One sanitary train, composed of four field hospital companies and four ambulance companies.................	949
Total	27,152

Each regimental headquarters will consist of seven officers and 294 men. There will be a headquarters platoon of 93, a staff section of 36, an orderlies' section of 29; a band section of 28; a signal platoon of 77, including a telephone section; a sappers' and bombers' platoon of 44; a pioneer platoon of 55 for engineer work, and a cannon platoon of 33 officers and men.

Sixteen Kitchens Included.

The transportation equipment to each regiment will be 22 combat wagons; 16 rolling kitchens, 22 baggage and rations wagons; 16 rations carts; 15 water carts; three medical carts; 24 machine gun carts; 59 riding horses; eight riding mules; 332 draught mules; two motorcycles with side cars; one motor car and 42 bicycles.

There will be 14 machine gun companies to the division. Each of the four infantry regiments will have one, each of the two brigades a machine gun battalion of three companies, and the division will have a separate machine gun battalion of four companies. This gives the division a mobile machine gun strength of ten companies which can be used as special needs require, while each regiment still has its own machine gun equipment in one of its component companies. And in addition there are 48 sections of auto riflemen, each section carrying four light machine guns.

Cow Wears Glasses.

Ferndale, N. Y.—In an effort to save a cow from becoming blind, its owner, Charles Hagaman of Ferndale, who values the animal at $7,000, has had an operation performed on the cow's eyes, and it now wears colored glass spectacles to protect it from the sun. The cow has taken seven prizes at cattle exhibits in two years. Recently it contracted an ailment of the eyes that was threatening its sight. It is said the animal's condition is much improved.

Fire Hose Runs Amuck.

Brazil, Ind.—A demonstration of Brazil's new fire truck and engine came to a sudden stop here the other day when the hose got away from the nozzle men and wiggled like a snake down one of the main streets, dispersing the crowds.

CARE OF PERISHABLES

Proper Methods of Handling, Shipping and Storing.

United States Department of Agriculture Making Effort to Decrease Great Waste of Fruits and Vegetables.

(From the United States Department of Agriculture.)

In an effort to decrease the great waste of perishable fruits and vegetables due to careless and improper handling, which subtracts hundreds of thousands of pounds of food from the country's supply each year, the bureau of markets and the bureau of plant industry of the United States department of agriculture will, as rapidly as practicable, extend the present demonstrational and investigational work with producers, shippers, carriers and warehousemen regarding proper methods of handling perishables. This work will be taken up with funds just made available in the food production bill recently enacted by congress.

Specialists declare that the successful transportation or storage of perishables is primarily dependent upon careful and proper handling methods when being prepared for shipment. If carelessly or improperly handled when harvested and packed, all care exercised thereafter to insure sound condition may be largely ineffective and result in serious loss to the producer as well as loss of foodstuffs to the consumer. Specialists in the harvesting and handling of fruits and vegetables, through demonstrational work and other practicable means in the important producing sections, will reach as many producers and shippers as possible.

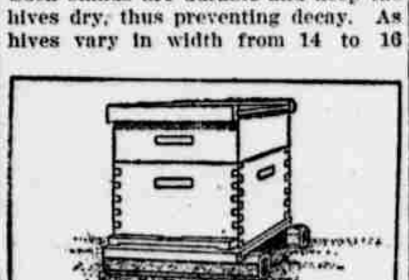
These and other specialists also will advise producers in the construction and alteration of storage houses for products that can be successfully stored, especially without artificial refrigeration, and in regard to the most efficient use and management of such storage houses. Specialists declare that losses of fruits and vegetables are high in many well-constructed storage houses merely because the equipment is improperly used.

The department will seek to reduce losses of perishables still further by demonstrating to carriers and urging upon them the use of improved refrigerator cars which give uniformly greater refrigeration efficiency with marked economies as regards ice consumption and in heavier loading. Several thousand refrigerator cars have been built or rebuilt in practical conformity with the results of recent investigations and are in use on many railways. It is the hope of the department specialists that the use of uniformly better equipment may become much more general during the years when war needs make the conservation of food especially important.

MAKE DURABLE HIVE STANDS

Tile Drain Pipes or Concrete Blocks Are Excellent—Dryness Assured and Decay Avoided.

Tile drain pipes or concrete blocks can be used to make good hive stands. Such stands are durable and keep the hives dry, thus preventing decay. As hives vary in width from 14 to 16



Durable Hive Stand.

inches, the stands must be about 18 inches wide. Concrete blocks 2 by 6 by 18 inches can be made cheaply or drain tile of the same length bought. —Farm and Home.

GIVE ATTENTION TO CALVES

Sour Milk, Irregular Feeding and Varying Temperatures Will Not Make Good Animals.

If you have spring calves you need give them attention in order to keep them growing. Sour milk, irregular feeding, and varying temperatures of the milk will not make good calves. After the calves have been changed to skim milk the temperature of the milk can gradually be reduced until cold milk is fed all the time. It had best be cold all the time than warm one feed, cold another and hot another. If a farm separator is used, of course the milk should be fed as soon as skimmed.

REASON FOR LESS CHICKENS

High Price of Grain Has Caused Many Farmers to Part With Fowls—Eggs Also Higher.

Because of the present prices of grain, there is a tendency this year on the part of poultrymen to keep fewer hens and to raise fewer chickens. The price of grain is higher now than for years. Many farmers killed off their flocks last year and many are keeping a smaller percentage than ever before. They have not stopped to consider the poultry situation seriously. While feed has gone up 60 to 70 per cent during the past year, eggs also have increased in price.

DOCTORS EAGER TO LEARN FROM ALLY

American Surgeon Calls Tale of Serious Differences a German Canard.

UTMOST CORDIALITY EXISTS

Excellent Work Being Done by American Units Has Been Subject of Complimentary Remarks by British Surgeons.

British Headquarters in France and Belgium. — German agents recently have been spreading broadcast on the continent the report that serious differences have arisen between the British army medical service and the American surgeons and physicians who have been working with the British forces in France. Special publicity has been given the story by its sponsors in Belgium and France. The correspondent of the Associated Press accredited to British general headquarters has made a careful investigation of the facts, visiting not only base hospitals which have been taken over by American medical units, but casualty clearing stations in which American surgical teams are working.

The utmost cordiality has and does exist between the British medical service and the Americans who are working with them. The assertion that there has been any quarrel between the bodies is without foundation. As one eminent American has put it:

"The story is a gross canard. The reasons for circulating it are obvious. The Germans are trying to create among Belgian and French civilians a contempt for America and Great Britain and consequently a hostility toward these two nations."

Americans Are Part of Machine.

The six medical units which were sent over from the United States to take charge of six British base hospitals have become a part of the smoothly running organization that the British have developed. The Americans feel that they are fortunate in their position. They realize that they have much to learn about war hospitals and they are having the opportunity of learning rapidly from men who have had more than three years' experience. The British, on the other hand, recognize fully the sacrifices that have been made by the Americans, many of them eminent surgeons with big practices at home, to come to France to do their bit in caring for the wounded.

The excellent work being done by the American units has frequently been the subject of the most complimentary remarks by all ranks of the British medical organization. The service which the workers from the United States have performed is viewed as one of the bright spots in a war which is causing so much misery.

When the Germans began their ruthless sinking of hospital ships and it became apparent that it would be unsafe to try to transport wounded British soldiers and German prisoners to England, there was a hurry-up call for the establishment of more base hospitals in France. America was asked for assistance and the six units were rushed across to Europe, without stopping to bring their full equipment. They immediately took over large base hospitals, and although they were handicapped for a time because of lack of supplies, their institutions soon ranked among the best, for while the units were inexperienced in war work they were highly trained in hospital service.

Hospitals Care for Germans.

Roughly speaking, the six base hospitals conducted by the Americans have beds for about 1,500 patients each, and there are many times when they are filled to overflowing, for base hospitals must care not only for their own wounded but for Germans as well. The six base hospitals have, in addition to their other work, furnished about ten surgical teams for service in casualty clearing stations near the firing line. These teams usually consist of a surgeon, an assistant, a nurse and an orderly. American surgeons whose names are famous internationally are laboring beside youthful medical officers who have sat under them in the classroom at home. Doctor Crile of Cleveland, Doctor Cushing of Harvard, Doctor Brewer of New York, Doctor Harte of Philadelphia, Doctor Murphy of St. Louis and Doctor Frederick Besley of Chicago—they call them majors over here—all have been or are at present working night and day in casualty clearing stations, which have been caring for the wounded from the last great offensive.

These surgical teams have had one characteristic experience. Their work is hampered and their lives are endangered by German airmen, who persist in hurling high explosives down among them. In one of the latest raids the German aviators killed or rewounded many of their own men who were prisoners being cared for in one of these hospitals.

To Teach Jiu Jitsu.

San Francisco.—The soldiers of the United States are to receive a thorough course in the Japanese art of jiu jitsu. Allan S. Smith has been commissioned by the government as instructor, he has recently returned from Tokyo with the "black belt," an honor corresponding to the heavyweight title in America.

SHUN THE SWINDLERS.

When You Invest Your Money Do Not Buy a Gold Brick.

Swindling promoters are shrewd. Whenever they find any line of industry phenomenally successful they immediately organize fake companies and print lurid literature telling of the wonderful prospects in this line, of fortunes that have been made in it and of the opportunity they are giving to small investors to secure a generous income. So we have had automobile, oil, mining, real estate, hotel, plantation, and now there are several newer schemes, in which the credulous public is invited to put all its loose change.

Why doesn't the public realize that in all these lines of business the old, well established and dividend paying concerns offer the best opportunities for investment? They never print lurid literature, guaranteeing fortunes and promising extravagant dividends. They are managed by men whose characters put them above this, yet the public will only bite on a bait that is made extraordinarily attractive by promises impossible of performance.

Hence the vogue of companies that sell their shares as low as 1 cent each. The man with $10 who can buy a certificate for 1,000 shares jumps at the promise held out to him that some day his $10 may grow into $10,000. To him it is a lottery, nothing else. And when he loses, as he always does, he goes out on the street corner and denounces the "sharks of Wall stret."—Jasper in Leslie's Weekly.

UNGATHERED HONEY.

Billions of Dollars' Worth Is Lost by Waste Every Year.

An editorial in the Farm and Fireside says:

The present centering of attention by economists on food waste is showing that one of the most unnecessary losses of a valuable food product is the ungathered nectar of flowers.

Speaking in a broad way, there are few farms in America that do not annually produce several hundredweight of honey over and above the honey required to sustain the bee harvesters of this appetizing staple food product.

The farms on which the owners systematically plan to save their honey at present are less than one in a hundred. On several million American farms where this honey goes unharvested year after year this wastage aggregates billions of dollars.

A Minnesota scientific bee culturist, Francis Jager, is authority for the statement that 100 colonies of honeybees suitably located and properly cared for can be expected to average a net production of profit twice as great as that of the average 160 acre farm of his state can show, while the equipment and overhead are less. Of course 100 colonies of bees cannot be pastured on an average sized farm, but there are innumerable farms where a dozen hives of bees could gather $100 worth of honey annually.

The Supreme Court.

For the supreme court of the United States there is no exact precedent either in the ancient or the modern times. In making the great constitution the "fathers" availed themselves of all past knowledge and experience, but it was probably from the French publicist Montesquieu that they got their idea of the supreme court. In this book, "The Spirit of the Laws," Montesquieu, after making a masterly analysis of all forms of government, uses these words: "There is no liberty if the judicial power be not separated from the legislative and the executive." The framers of the constitution knew Montesquieu's book well, and there is not any room for doubt about their getting the idea of the supreme court from that source.—New York American.

Monkeys In Boots.

In tropical countries the natives have many unique ways of catching monkeys. One of them, as explained by a traveler, is this: The hunters walk about in short boots in sight of the monkeys. Then they take the boots off, place some gum in the bottoms and leave them on the ground, withdrawing themselves to a great distance. Presently the monkeys come down from the trees and try on the boots, and when the hunters come after them the boots stick to the feet of the monkeys, and they are unable to climb. Thus the imitative little animals are captured.

Well Posted.

"I hear you are thinking of buying a farm."

"That's my intention," said the city man, with a complacent air.

"Well, don't forget the importance of silos."

"Trust me for that, sir. By the way —er—do those things consume much gasoline?"—Birmingham Age-Herald.

Didn't Sound It.

"What was that your daughter was singing at the piano?"

"Oh, that was 'Sweet and Low,' I believe."

"Well, I certainly would never have taken it for anything like that."—St. Louis Post-Dispatch.

Colors of Austria.

The Austrian black and yellow were the colors of the Holy Roman Empire. They were adopted, so the story goes, by Frederick Barbarossa, whose fancy was captured at a ceremony in Mayence by the black and gold flooring of the hall.

Heredity.

June—Does he get his mechanical ingenuity from his father's side or his mother's? Bess From his mother's; she was a poetess.—Life.

UNIQUE TEST FOR LIBERTY ENGINE

American Aviators Won't Have to Experiment While Flying Over Enemy.

TWO PROBLEMS TO SOLVE

United States Bureau of Standards Has Devised a Way to Reproduce the Conditions Found in High Altitudes.

Washington.—The bureau of standards is erecting a little greenish-gray concrete building on the edge of its grounds where one of the final chapters of America's preparations for aerial warfare will be written. The bureau declines to discuss what part it will play in the final design of the new "Liberty air engine" which the government is expected to mount on all American airplanes for use in the European war, but it has become known that before the final design of this engine is approved it must undergo a few final tests in that little greenish-gray building.

There will be determined, under conditions almost identical with conditions found at various altitudes, just how an airplane engine performs when it gets so high that the air gets perceptibly thinner. It will be tested in a temperature down to freezing.

Bringing High Altitude Down.

The bureau building is a tomblike structure, full of delicate instruments which will have the effect of bringing the skies down to the earth, insofar as airplane conditions are concerned. It is impractical to send an engineer aloft to watch the engine perform up there, so the bureau plans to bring the skies to the engine.

Ever since the European war began, the aviators of the warring nations have been flying to astonishing heights in the clear air of France. Altitudes of 10,000 feet are quite commonplace, and 20,000-foot flights no longer excite wonder. Aviators must go up high, and they must have engines that will take them there, so the engine designers have been experimenting for the last three years with an engine that won't "smother" when it gets into thin air.

So far the allies have been unable, for various reasons, to make absolutely accurate tests. An engineer can go aloft in a plane, but he can't load in a ton or two of apparatus also and test out sparking efficiency, compression density, horsepower delivery and all the other things that he should do. Being confronted with the necessity of making such tests, the bureau of standards experts figured out a method.

The Two Problems.

First, they argued, they must know just what an airplane does at an altitude, say of 20,000 feet. An engine that will perform perfectly at 10,000 feet has a tricky habit of "stumbling" and missing ignition when it gets another 10,000 feet higher, and the experts wanted to observe all its ailments at that height.

Second, they wanted some sort of a mechanical arrangement which would permit them to test untried types of engines under conditions similar to conditions very high aloft, and to approve or condemn the performance of these untried types.

So they set to work to build a concrete, tomb-like structure, about 15 feet long by 6 feet wide and 6½ feet high. This concrete chamber was so constructed that it could be made a vacuum if necessary. The walls are 12 inches thick and tarred on the outside. They needed thick walls because at 20,000 feet altitude the air pressure is about seven pounds to the square inch—about half the pressure at sea level. That meant that when the scientists got to duplicating air pressure at 20,000 feet the walls had to support an outside pressure of air equal to eight pounds to the square inch. If the walls were not built thick they would crush in like paper.

Either Hot or Cold.

Then a complete heating and refrigerating plant was installed so that when the four or six big fans which are to whirl the air over the engine at 40 miles an hour start their gale it will be down to the temperature that one finds thousands of feet up.

Into this air chamber they expect to put the engine type that is to be tested, mounted so that it can tilt forward, backward or sidewise, just as it would behave in the air.

As soon as everything is ready the doors are locked and made airtight, and the engine is started. When it starts, the air on the inside of the chamber is the same density as the outside air, but when the engine begins to suck in air to make explosions the inside atmosphere rapidly becomes exhausted. The chamber is provided with an intake valve which will admit the air that is needed.

Observation Windows.

The chamber is also provided with glass windows, through which the experts may watch instruments which register the air pressure and the temperature of the chamber. By data secured in actual flights the bureau experts know the exact density of the air at each of the various hundred foot levels. An ordinary aneroid barometer would give this data only approximately. When the engine starts and begins consuming air on the inside of the chamber the inside pres-

CHICKEN CHATTER.

About the quickest way of creating a generation of weaklings is to breed from parents that at some time in their lives suffered from a contagious disease.

A bit of powdered charcoal beats most of the so called bowel remedies that are on the market.

Lice, heat and too much food make the June chick's life a short and painful experience.

When you "don't understand what is the matter" with the chicks just try changing their runs. Many times the very earth where they are is foul and full of disease germs.

Don't forget to give the poultry an extra allowance of water this warm weather. They may be able to pick up a good share of their living now, but they cannot pump water.

MAKING POULTRY PAY.

Freedom From Insects and Proper Feed Will Bring Success.

When anything is found wrong with poultry or other domesticated birds the maxim should be "look for lice," writes a poultry expert in the Philadelphia Press. Every year I believe more thoroughly in this maxim. There are two reasons why this must be true. They lie in the fact that lice breed in infinite numbers at the very season when other work is most insistently claiming every thought and every ounce of strength which the workers have to spare and in the additional encouraging fact that chicks from thrifty progeny on range can fight off all other ills if they are kept free from lice.

To give the chicks a fair chance for their fight dust the hens at the end of each week or sitting, as it is said to take a brood of lice about a week to hatch. Then put a very little plain oil on the head of each chick, use a little kerosene on the hens and trust to the favorable conditions prepared to give the results desired. Tobacco dust, simple and cheap, is used for dusting the hens. I do not like to use any dust on small chicks, as it seems to me there is danger of overdoing the matter.

The question of feed is disposed of in the same way. We plan to give as much time to feeding soft mash as we

White Leghorn hens, as a general rule, lead other breeds as layers, and this is one of the reasons why 90 per cent of all egg farms are stocked with this variety. They are small, active hens, producing equally well in confinement and on range. The hen shown is a Rose Comb White Leghorn.

can afford or believe to be desirable. Hopper feeding fills out all deficiencies and saves the time of the owners, while insuring that no chick shall get less than he needs. With chicks on full range, this is not as necessary, of course, as with chicks raised in confinement. But in all conditions I believe a little box of dry feed free to all the chicks is a first rate thing to provide.

The best ration for breeding fowls is plenty of good corn, a small amount of oats and all the dried meat scrap and wheat bran the fowls want to eat. A box of ground bran, a box of charcoal and a box of crushed oyster shells where the fowls can help themselves and a good supply of green grass will give more vitality to the eggs than any other feed.

The meat scrap and bran can be kept before the fowls where they can help themselves. They will not overeat after they have become accustomed to the food. Some persons have an idea that corn is not good for breeding hens, but my experience is that hens which eat large amounts of corn transmit more vitality to the chicks than those receiving other grains.

Banish the Rooster.

The rooster does not increase the egg production of hens in the same flock, and he may decrease it. Kill him, pen him up or sell him when the breeding season is over and produce infertile eggs. Blood rings are the cause of one-third of the annual egg loss, and the rooster is directly responsible. Blood rings are simply an early stage of chick development.

Proper Way to Carry a Hen.

The proper way to carry a fowl is to place it under the arm, the head pointing to the rear and the feet held firmly by the hand. In this way the bird can be carried for miles without the least discomfort to it or the person carrying it.